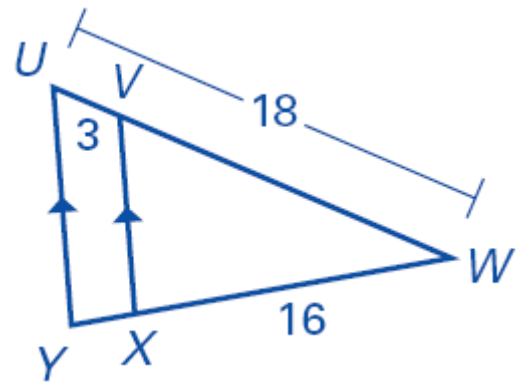


## Geometry 8.6 Notes: Proportions and Similar Triangles (pp 498-501)

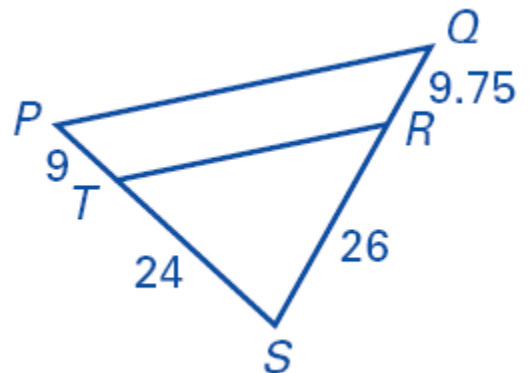
### Triangle Proportionality Theorem

**1. Example.** In the diagram  $\overline{UY} \parallel \overline{VX}$ ,  $UW = 18$  &  $XW = 16$ . What is  $YX$ ?



### Converse of the Triangle Proportionality Theorem

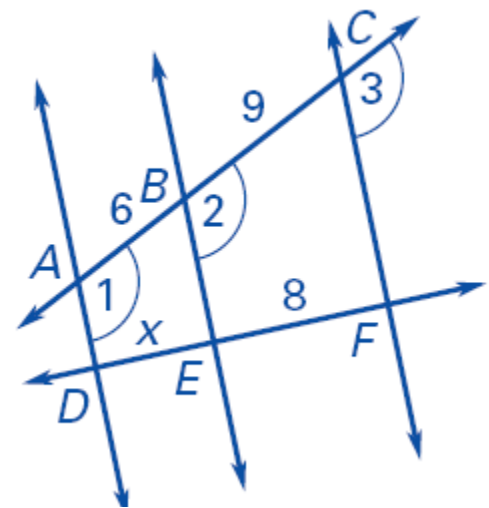
**2. Example.** Given the diagram, determine whether  $\overline{PQ} \parallel \overline{TR}$



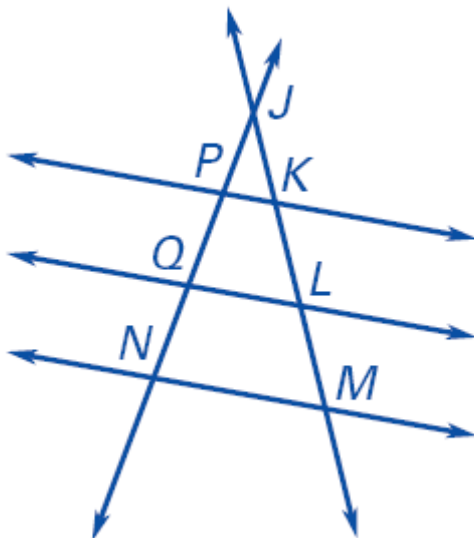
# Geometry 8.6 Notes: Proportions and Similar Triangles (pp 498-501)

## Parallel lines & transversals.

**3. Example:** In the diagram,  $\angle 1 \cong \angle 2 \cong \angle 3$ ,  $AB = 6$ ,  $BC = 9$ ,  $EF = 8$ . What is the value of  $x$ ?



**Guided Practice:** In the diagram  $\overline{PK} \parallel \overline{QL} \parallel \overline{NM}$ . Complete the statements.



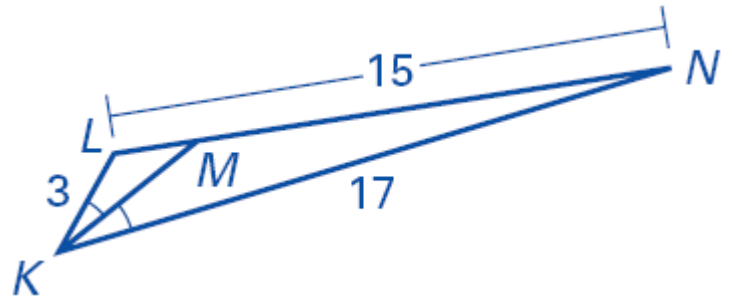
4.  $\frac{KL}{LM} =$

5.  $\frac{JP}{PQ} =$

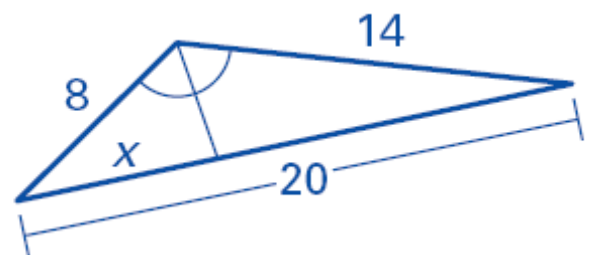
## Angle Bisector

## Geometry 8.6 Notes: Proportions and Similar Triangles (pp 498-501)

**6. Example:** In the diagram,  $\angle LKM \cong \angle MKN$ . Use the given side lengths to find MN.



**7. Guided Practice.** Find the value of the variable.

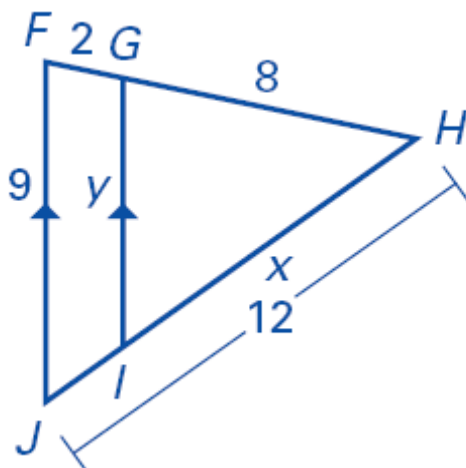


### Examples.

**8.** You are installing vinyl siding below the peak of a roof. All the pieces of siding are the same width and are installed horizontally. Are AB and CD the same length? Explain.



**9.**  $\overline{FJ} \parallel \overline{GI}$ . Find the values of the variables.

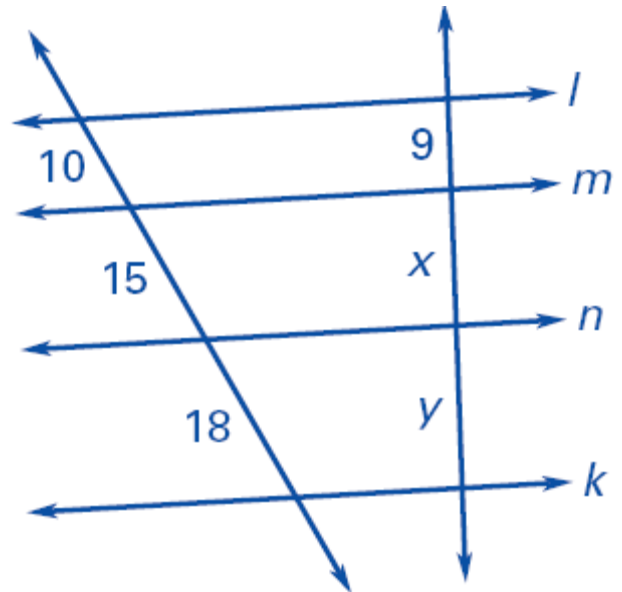


**Geometry**  
**(pp 498-501)**

**8.6 Notes: Proportions and Similar Triangles**

**Guided Practice.**

**10.**  $l, m, n, k$  are parallel. Find the values of the variables.



**11.** \_\_\_\_\_ Which value of  $AB$  would make  $\overline{EB} \parallel \overline{DC}$ ?

- A.** 20
- B.** 24
- C.** 26
- D.** 28
- E.** 30

**12.** What's the difference between dividing a segment proportionally and dividing a segment equally?

**13.** What do you know about a triangle that has a ray bisecting of the angles?

